

IN THE CLAIMS

Please amend the claims as follows:

Claims 1-28 (Canceled).

Claim 29 (Currently Amended): A process for the continuously operated distillation purification ~~by distillation~~ of ~~[[the]]~~ methanol, wherein the methanol is used as a solvent in ~~[[the]]~~ a synthesis of propylene oxide by reaction of a hydroperoxide with propylene, with the wherein methoxypropanols formed as by-products from the reaction of the propylene oxide with the methanol being are separated off simultaneously, wherein the solvent mixture obtained in the synthesis of the propylene oxide is separated in a dividing wall column into a low-boiling fraction comprising methanol, an intermediate-boiling fraction comprising the methoxypropanols as an azeotrope with water and a high-boiling fraction comprising water and propylene glycol, and

wherein the propylene oxide is prepared by a process comprising at least ~~the steps~~ (i) to (iii)

(i) ~~reaction of~~ reacting the hydroperoxide with propylene to form a mixture, (ii) ~~separation of~~ separating the unreacted hydroperoxide from the mixture resulting from ~~step (i)~~,

(iii) ~~reaction of~~ reacting the hydroperoxide which has been separated off in ~~step (ii)~~ with propylene,

wherein ~~with~~ an isothermal fixed-bed reactor ~~being used~~ is used in ~~step (i)~~, an adiabatic fixed-bed reactor is used ~~being used~~ in (iii), and a separation apparatus is used ~~being used~~ in ~~step (ii)~~ and wherein hydrogen peroxide ~~being used as~~ is used as hydroperoxide, and wherein the hydroperoxide and the propylene are reacted in the presence of a heterogeneous

~~catalyst, and the organic compound being brought into contact with a heterogeneous catalyst during the reaction.~~

Claim 30 (Currently Amended): A process for the continuously operated distillation purification ~~by distillation~~ of ~~[[the]]~~ methanol, wherein the methanol is used as a solvent in ~~[[the]]~~ a synthesis of propylene oxide by reaction of a hydroperoxide with propylene, with the wherein methoxypropanols formed as by-products from the reaction of the propylene oxide with the methanol being are separated off simultaneously, wherein the solvent mixture obtained in the synthesis of the propylene oxide is separated in a dividing wall column into a low-boiling fraction comprising methanol, an intermediate-boiling fraction comprising the methoxypropanols as an azeotrope with water and a high-boiling fraction comprising water and propylene glycol, and

wherein the dividing wall column comprises and is configured as two thermally coupled columns,

wherein the solvent mixture is separated into the low-boiling, intermediate-boiling and high-boiling fractions in ~~the~~ a column downstream of the feed column, or

the low-boiling and high-boiling fractions are taken off from the solvent mixture in ~~the~~ a feed column and the intermediate-boiling fractions is taken off in the downstream column, or

the high-boiling fraction is taken off from the solvent mixture in the feed column and the low-boiling and the intermediate-boiling fractions are taken off in downstream column, or

the low-boiling fraction is taken off from the solvent mixture in the feed column and the intermediate-boiling and high-boiling fractions are taken off in the downstream column.

Claim 31 (New): The process as claimed in claim 29, wherein the dividing wall column has from 15 to 60 theoretical plates.

Claim 32 (New): The process as claimed in claim 29, wherein the distillation pressure is from 1 to 15 bar and the distillation temperature is from 30 to 140°C, in each case measured at the top of the column.

Claim 33 (New): The process as claimed in claim 29, wherein the heterogeneous catalyst comprises the zeolite TS-1.

Claim 34 (New): The process as claimed in claim 30, wherein the liquid stream taken from the bottom of one of the coupled columns is partly or completely vaporized before it is passed to the other column, and the gaseous stream taken off at the top of one of the coupled columns is partly or completely condensed before it is passed to the other column.

Claim 35 (New): The process as claimed in claim 30, wherein the stream taken from the bottom of one of the coupled columns is partly or completely vaporized before it is passed to the other column, or the stream taken off at the top of one of the coupled columns is partly or completely condensed before it is passed to the other column.

Claim 36 (New): The process as claimed in claim 30, wherein the propylene oxide is prepared by a process comprising at least (i) to (iii)

- (i) reacting the hydroperoxide with the propylene to form a mixture,
- (ii) separating the unreacted hydroperoxide from the mixture resulting from (i),

(iii) reacting the hydroperoxide which has been separated off in (ii) with propylene,

wherein an isothermal fixed-bed reactor is used in (i), an adiabatic fixed-bed reactor is used in (iii), and a separation apparatus is used in (ii) and wherein hydrogen peroxide is used as hydroperoxide, and wherein the hydroperoxide and the propylene are reacted in the presence of a heterogeneous catalyst.

Claim 37 (New): The process as claimed in claim 36, wherein the heterogeneous catalyst comprises the zeolite TS-1.